



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAR 10 1995

REPLY TO THE ATTENTION OF:

R-19J

Colonel Ralph Grieco  
District Engineer  
Department of the Army, Corps of Engineers  
Louisville District  
Post Office Box 59  
Louisville, Kentucky 40201-00559

Dear Colonel Grieco:

In accordance with our responsibilities under §309 of the Clean Air Act, the National Environmental Policy Act (NEPA), and §404 of the Clean Water Act, the United States Environmental Protection Agency - Region 5 has reviewed the Draft Environmental Impact Statement (EIS) and Public Notice # 199401091A for the Proposed New Water Supply Reservoir located in Williamson and Johnson Counties, Illinois. The purpose of the project is to supply water to the City of Marion and the Lake of Egypt Water District. The preferred alternative is to construct a 1,172 acre raw water reservoir located near the town of Creal Springs, Illinois.

EPA has significant concerns regarding compliance of the proposed action with the requirements of NEPA and the Clean Water Act §404(b)(1) Guidelines. Specifically, we believe the draft EIS fails to provide sufficient information regarding the environmental impacts of the proposed project and all reasonable alternatives to the proposed project. Moreover, we are concerned that the Draft EIS does not adequately consider future water conservation efforts as part of the water demand forecasting. As a result, we also believe there is not sufficient information to make a reasonable judgment as to whether the proposed project will comply with the §404(b)(1) Guidelines. The enclosure to this letter provides a more detailed statement of our concerns.

The Council on Environmental Quality's (CEQ) regulations implementing NEPA are very clear that the "alternatives" section of an EIS must rigorously explore and objectively evaluate all reasonable alternatives, including the proposed action and the no-action alternative. Moreover, this analysis is intended to display comparisons of the alternatives on environmental and other grounds. Unfortunately, while the draft EIS for the proposed water supply reservoir does describe several "technically feasible" alternatives, there is no comparison between the alternatives and the proposed action.



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We are also concerned that the alternatives analysis needs to incorporate an improved forecast of water demands, i.e., a forecast that includes an examination of future trends in water conservation. This forecast needs to examine, in particular, how installation of efficient toilets and showerheads in all new residential construction in the United States after January 1, 1996, as per the requirements of the Energy Policy Act of 1992 (Public Law 102-486) will affect those forecasts.

CEQ's regulations are also clear that the "environmental consequences" section of an EIS include a scientific analysis of the direct and indirect environmental effects of the proposed action and each of the alternatives. This analysis is intended to form the basis for concise comparisons of the "alternatives" section. The draft EIS for the proposed water supply reservoir, however, does not contain this analysis. Instead, the draft EIS only provides an analysis of the impacts of one alternative, i.e., the proposed action. Moreover, this assessment only identified the direct impacts that would be caused by the footprint of the proposed reservoir, and ignored potential indirect impacts. For example, the draft EIS indicated that there are several residential developments that are pending resolution of the City's water supply problems. Since these developments are apparently reasonably foreseeable consequences of project implementation, the draft EIS needs to provide some analysis of the potential impacts of these developments. Examples of the anticipated developments include land conversions, storm water runoff impacts, wetlands impacts, and habitat fractionation.

The Draft EIS is also lacking in its assessment of the affected environment. First, there is no assessment of the environment that would be affected under the "technically feasible" alternatives. Moreover, the assessment of the biological resources of the area affected by the proposed project is also very limited. In particular, we are concerned that under this assessment:

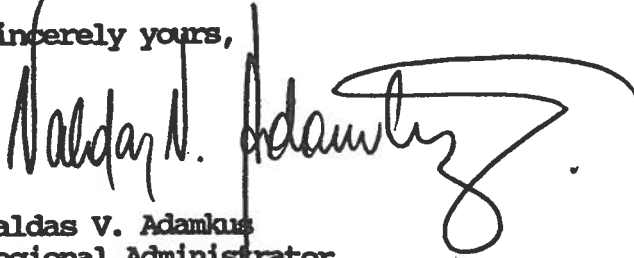
- vegetation was surveyed only in the winter season;
- descriptions of the animal populations relied only on literature searches;
- no surveys for the endangered Indiana bat were conducted, despite high potential for roosting and foraging habitat along riparian corridors; and
- there was no quantification of the extent of riffle/pool complexes and their associated fauna, despite the projected loss of over 6 miles of Sugar Creek.

Based on these concerns, and in accordance with EPA's national rating system (an explanation of which is enclosed), EPA has rated the draft EIS as "inadequate" ("3"). EPA believes the extent of the deficiencies of the draft EIS are such as to warrant preparation of a revised draft or a supplemental draft EIS.

If the concerns that form the basis of this rating are not resolved adequately, EPA may consider the EIS a candidate for referral to CEQ pursuant to §309 of the Clean Air Act.

Thank you for the opportunity to review and comment on this Draft EIS. EPA is committed to working with you, the applicant, and the other Federal resource agencies to resolve our concerns. EPA believes that through a collaborative effort by all the involved parties, an opportunity to provide for an environmentally sound drinking water supply for the City of Marion can be identified and permitted. If you have any questions or comments, please contact Robert Springer, Assistant Regional Administrator at 312/353-2024.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Valdas V. Adamkus". The signature is written in a cursive style with a large, sweeping flourish at the end.

Valdas V. Adamkus  
Regional Administrator

Enclosure

**United States Environmental Protection Agency - Region V**  
**Technical Comments**  
**Draft Environmental Impact Statement**  
**for**  
**Proposed New Water Supply Reservoir**  
**Williamson and Johnson Counties, Illinois**

EPA is concerned that the proposed action would result in the permanent loss of 1172 acres of land, comprised of wetlands, forest, thickets, old fields, cropland, ponds, rail and road ways. The proposed project area supports a significant complex of ecosystems, representing various natural communities, some of which are considered to be of high quality. This area also is essential to several unique flora and fauna that rely on this ecosystem complex for survival.

We are also concerned that because the survey of the flora of Sugar Creek was performed only in December 1989 and January 1990, it cannot fully characterize the vegetative biodiversity of Sugar Creek as would a four-season survey. Therefore, it is impossible to determine the full impacts of the project on the biodiversity of the various plant communities based on the limited information in the draft EIS.

In terms of fauna, the draft EIS lists the mammals, birds, reptiles, and amphibians that would typically occur in the project area. However, apparently no field studies were done to verify the accuracy and completeness of these lists. Therefore, it is also not possible to accurately portray the full impact that the preferred alternative will have on the wildlife biodiversity.

EPA is also concerned that construction of the preferred alternative may result in the loss of essential habitat for two State Threatened and Endangered species, the Least Brook Lamprey and Indiana Crayfish. The EIS needs to quantify this potential impact on the local populations of these species.

#### **Wetlands**

The preferred alternative would destroy approximately 40 acres of wetlands as well as 6.2 miles of Sugar Creek, 1.1 miles of an unnamed tributary and 3 miles of Maple Branch. Sugar Creek is a high quality stream with a series of riffle and pool complexes. The EIS needs to quantify more completely the size and extent of these riffle and pool complexes. Since this information is currently unknown, we cannot assess the total loss that the preferred alternative would have on the aquatic ecosystem.

#### **Water Quality**

The draft EIS also addresses the potential downstream impacts of the proposed reservoir and states that the current proposal has the capability to discharge sufficient water to provide a similar flow to what would occur naturally on Sugar Creek. However, there is no gaging station on Sugar Creek, and instream flow needs are based only on a gaging station on Crab Orchard Creek. The use of data from a different stream that has different characteristics, and is located in another watershed with dissimilar land uses, should not be used to project the ability of dam operations to mimic natural flow regime. The draft EIS also does not address the potential shift that could occur to dissolved oxygen (DO) and temperature levels in this cool water stream.

In terms of the reservoir water quality, the draft EIS does not address the potential adverse impacts that could occur due to non-point source pollution. The impacts to water quality due to erosion, turbidity, and sedimentation must be assessed. In addition to these water quality parameters, the document does not address the potential adverse impact of leachate from former mining activities and abandoned landfills that are present in the project area basin would have on the proposed reservoir.

### **Lake Shore Management**

The primary purpose for the proposed project is to be a drinking water supply to City of Marion and Lake of Egypt Water District. The lake shore regulations included in the draft EIS discussed a series of land use classifications and regulations designed to control activities on the proposed lake. However, the draft EIS did not demonstrate how the city will monitor and enforce these regulations. Under different management scenarios formulated to protect the proposed drinking water supply, the EIS should provide an analysis of the reasonably foreseeable environmental consequences that might occur in the proposed project area.

### **Secondary Impacts**

The secondary impacts of constructing and operating of the proposed reservoir, such as increased residential development, have not been assessed. The draft EIS indicates that an increase in water supply is necessary due in part to proposed future development in the COM and LEWD service areas. Since these developments are foreseeable consequences, the identification and discussion of the secondary environmental impacts associated with the proposed developments must be included in the document. The discussion should address, but not be limited to, such issues as air quality, change in land type and use, and traffic flow.

### **Federal Threatened and Endangered Species**

We are concerned that the proposed project may adversely affect several federally listed endangered species, as well as candidate species. Therefore, we believe it is essential that the Corps work with the U.S. Fish and Wildlife Service to ensure that all actions necessary to demonstrate compliance with the Endangered Species Act are undertaken.

### **Alternatives**

We believe the draft EIS does not provide an adequate assessment of alternatives. Rather than examining all feasible alternatives in detail, the draft EIS provides little, if any, information regarding the feasible alternatives and their impacts. Instead, the only detailed discussion of the affected environment and associated impacts provided is related to the preferred alternative. By not considering all of the feasible alternatives to the same level of detail, the ability of the public and decision-makers to make equal comparisons of all of the feasible alternatives is limited.

In formulating alternatives, the draft EIS should consider alternatives that combine a number of alternative approaches to providing an adequate water supply. For example, while the draft EIS notes that dredging of the existing Marion City Lake could alleviate water quality problems, but not increase yield, it does not examine the feasibility of combining this dredging alternative with use of other existing water reservoirs.

Another example of combining approaches would be to examine the use of water

conservation<sup>1</sup> to augment other water supplies.

EPA also believes that any cost comparisons of the alternatives should not be limited to the annual operating costs of each of the alternatives, and should be clear as to whether the estimate is for raw or treated water. In addition, the EIS needs to provide information as to how the costs were calculated, and ensure that all aspects of construction, land acquisitions/right-of-ways, operation and maintenance, water purchase, individual/business/industrial cost, and mitigation are included.

#### Conservation and Demand Projections

The draft EIS indicated that the unaccounted for flow (UAF) for Marion and LEWD is at least 10 percent. The Illinois Department of Transportation (IDOT), which is charged with regulating diversions from Lake Michigan, has developed an extensive statewide program to help municipalities detect leaks and reduce UAF. This program has been highly successful, reducing the UAF for most participating communities to 4 per cent or less. We strongly recommend that this program be applied to this project. This analysis must be included as part of each alternative. This discussion should encompass the reduction of water loss on a daily, seasonally, and yearly basis.

The DEIS did not critically analyze the possibilities of water conservation, culminating in the statement on page 21, "appliances and fixtures are available for new construction and remodeled structures that consume less water but few communities in the United States make their use mandatory". Under the Energy Policy Act of 1992 (Public Law 102-486), efficient toilets (1.6 or fewer gallons per flush) and showerheads (2.5 gpm or less) are to be required on all new residential construction in the United States after January 1, 1996. Even before this Act was passed, more than a third of all States had similar laws on record.

This means that significantly lower fixture values will become the norm, as new homes are built and old toilets or showers replaced. We believe the EIS needs to critically examine how compliance with this new law will affect water demand forecasts.

Overall, the DEIS must include the information that would determine the role of water conservation as part of all the feasible alternatives. This information should include monthly or seasonal variations in water demand, and a better estimate of the proportionate role of residential, commercial and industrial flows. We recommend that the Corps obtain the California Department of Water Resources Conservation Office (CDWRC) spreadsheet program for community planners and consultants to evaluate the cost effectiveness and impact of water conservation activities, and apply that program to this project. The CDWRC can be reached at P.O. Box 942836, Sacramento California, 94236: telephone: 916/322-9989.

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<sup>1</sup>We also believe it is inappropriate to eliminate water conservation as a feasible approach, as does the draft EIS, solely due a characterization of conservation as "voluntary" in nature.